Before the FEDERAL COMMUNICATIONS COMMUNICATIONS COMMUNICATIONS COMMUNICATIONS COMMUNICATIONS DC 20554

FEDERAL SCHEMENICATIONS COMMISSION

OFFICE OF THE SECRETARY In the matter of Inter-Carrier Compensation CC Docket No. 99-68 for ISP-Bound Traffic

AMERITECH COMMENTS

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I. INTRODUCTION AND SUMMARY

The Ameritech Operating Companies (Ameritech) respectfully submit the following comments in response to the Notice of Proposed Rulemaking (Notice) in the above-captioned proceeding. In the *Notice*, the Commission proposes to establish inter-carrier compensation for Internet service provider (ISP)-bound traffic.

The Commission tentatively concludes that "a negotiation process, driven by market forces, is more likely to lead to efficient outcomes than are rates set by regulation" and that "as a matter of federal policy, the inter-carrier compensation for this interstate telecommunications traffic should be governed prospectively by interconnection agreements negotiated and arbitrated under sections 251 and 252 of the Act." Alternatively, it asks whether Commission staff should arbitrate inter-carrier compensation disputes.² It also invites parties to submit different

Notice at para. 30.

Id. at para. 31.

inter-carrier compensation proposals that are consistent with the Commission's stated goal of "ensuring the broadest possible entry of efficient new competitors, eliminating incentives for inefficient entry and irrational pricing schemes, and providing to consumers as rapidly as possible the benefits of competition and emerging technologies.³

In addition to proposing inter-carrier compensation for ISP traffic, the Commission asks parties to address the extent, if any, to which the most favored nation (MFN) provisions of section 252(i) of the Communications Act affect parties' ability to negotiate or renegotiate any provisions in their existing interconnection agreements that establish alternative compensation mechanisms for ISP traffic.⁴ Finally, the *Notice* invites comment on whether it is feasible to separate interstate from intrastate ISP-bound traffic for inter-carrier compensation purposes and on how the costs and revenues of providing dial-up ISP access should be treated for separations purposes.⁵

As discussed below, the Commission should not require any inter-carrier compensation for ISP traffic. The Commission concedes that it does "not have an adequate record upon which to adopt a rule regarding inter-carrier

Id. at para. 33.

⁴ *Id.* at para. 35.

⁵ *Id.* at para. 36.

appears to be based on the mere assumption – without any factual support - that LECs originating ISP traffic (hereinafter referred to as "originating LECs") fully recover their costs from end user revenues, while LECs delivering such traffic to their ISP customers (hereinafter referred to as "ISP LECs") do not. This assumption is wrong. As demonstrated in the attached study of Ameritech's costs and revenues in originating ISP traffic, Ameritech does not recover its costs of originating ISP traffic; in fact, there is a substantial gap between its costs and revenues. Significantly, Ameritech limited the analysis in its study to end users who have purchased second lines. Moreover, it attributed *all* revenues from the sale of second lines – including measured service revenues in states lacking a flat-rated service option - to ISP access. Nevertheless, even with these limitations and assumptions, Ameritech's costs exceed its revenues in all five of its states.

This revenue shortfall is, of course, a direct consequence of the ISP access charge exemption. Ameritech is under no illusion that the Commission will lift that exemption in this proceeding. Surely, however, any burden imposed by that exemption must be shared by all LECs. If originating LECs cannot recover their costs, it should hardly be their charge to ensure that ISP LECs obtain full cost recovery. Indeed, any rule imposing such an obligation or permitting states to do so would not merely be contrary to the public interest, but arbitrary, capricious, and confiscatory.

⁶ Id. at para. 28.

While the Commission's inter-carrier compensation proposal is thus fundamentally ill-conceived, the Commission's tentative conclusion that inter-carrier compensation be established through negotiations conducted under the auspices of section 252 negotiation and arbitration procedures is flawed on completely independent legal grounds. As an initial matter, it is not clear that the Commission can leave to the states the regulation of predominantly interstate access traffic. But even assuming *arguendo* that it can, the Commission's proposal would still be unlawful on at least three separate grounds.

First, states would have no authority to act on the FCC's invitation to establish inter-carrier compensation arrangements for ISP traffic. State public service commissions, like the FCC itself, are creatures of statute; their substantive and procedural powers are limited to those conferred by statute. State regulatory commissions do not have statutory authority to regulate interstate access traffic. Thus, even if the FCC left to the states the regulation of interstate access traffic, states would be unable to do so.

Second, since inter-carrier compensation for ISP traffic is not required by section 251(b) or (c), LECs cannot be required to address the terms of such arrangements in a section 251/252 interconnection agreement. The Act is quite clear as to the scope of a LEC's duty to negotiate under section 252, and the Commission may not rewrite the Act simply because it finds it politically expedient to defer certain inter-carrier compensation issues to the states.

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Third, because inter-carrier compensation for interstate access traffic is outside the scope of section 251(b) and (c), state commissions do not have authority to address this matter in an arbitration conducted under section 252. Section 252 is quite specific as to the universe of issues a state commission may address in a section 252 compulsory arbitration. Inter-carrier compensation for interstate access traffic is not in that universe. Therefore, states may not use section 252 arbitration procedures to require inter-carrier compensation for ISP traffic.

In fact, state regulatory commissions could not arbitrate such arrangements even outside the purview of section 252. State regulators may not decide on their own or at the beckoning of the FCC to arbitrate a matter; they must have statutory authority to do so, if not under section 252, then under state law. The FCC has undertaken no analysis of the number of state regulatory commissions (if any) that would have authority under state law to address intercarrier compensation for ISP traffic in a binding arbitration, and Ameritech suspects that none of them would have such authority. For all of these reasons — and independent of the fundamental illegitimacy of inter-carrier compensation for ISP traffic - the Commission's tentative conclusion that states may impose an inter-carrier compensation requirement for ISP traffic in a compulsory arbitration of an interconnection agreement must be rejected.

Irrespective of whether the Commission requires or permits states to require inter-carrier compensation for ISP traffic – and as shown herein, it should

not - the Commission should require all LECs to use reasonable diligence to identify their ISP customers and to exclude ISP traffic that is not eligible for reciprocal compensation from their reciprocal compensation bills. Because dialup ISP traffic is the functional equivalent of Feature Group A (FG-A) traffic, it is extremely difficult for an originating LEC to distinguish originating ISP traffic from local traffic. To prevent improper billing of reciprocal compensation for ISP traffic, the Commission should require all LECs to take reasonable steps to identify their ISP customers, such as by ascertaining whether customers ordering new business lines intend to use those lines for ISP access.

As to the implications of section 252(i), that provision does not entitle a so-called competitive LEC (CLEC) to opt into the reciprocal compensation terms of another LEC's interconnection agreement. Section 252(i) requires incumbent LECs to make available any "interconnection, service, or network element" provided under an agreement approved under [section 252]." Reciprocal compensation is not an "interconnection, service, or network element." Indeed, it would make no sense to extend section 252(i) to reciprocal compensation because reciprocal compensation rates must, by law, reflect the costs of the terminating LEC. Extending MFN rights to reciprocal compensation would thus enable that LEC to receive compensation at the rate of the least efficient competitor, the one with the highest terminating costs."

In the *Notice*, the Commission states that, until it adopts inter-carrier compensation rules, state commissions will continue to determine whether reciprocal compensation is due for this traffic. *Notice* at para. 28. States,

Nor would section 252(i) apply to inter-carrier (as opposed to reciprocal) compensation arrangements, should the Commission be so arbitrary as to require such arrangements. As noted, section 252(i) applies only to an interconnection, service, or network element provided under an agreement approved under section 251/252. Inter-carrier compensation is not an "interconnection, service, or network element," nor does the Commission have authority to require that it be made available under an agreement approved under section 251/252.

Finally, the Commission should not permit state commissions to adopt inter-carrier compensation requirements for intrastate ISP traffic because ISP traffic is, at least at this point in time, jurisdictionally inseverable. While this traffic is predominantly interstate, Ameritech does not oppose a ruling that the revenues and costs associated with the origination of ISP traffic may continue to be booked in the intrastate jurisdiction. Such a decision would avoid the difficult allocation questions that would attend a different ruling. On the other hand, if the Commission requires inter-carrier compensation payments for ISP traffic, those costs and revenues must be booked to the interstate jurisdiction.

Moreover, they should be recognized for what they are: a subsidy payment from the originating LEC. As such, consistent with Congress' emphasis on making subsidies explicit, they should be included with costs associated with LEC

however, have no authority to require LECs to pay reciprocal compensation for ISP traffic because, as the Commission has recognized, section 251(b)(5) does not require it. The Commission's deference to the states in this regard is unlawful, and has been appealed by Ameritech and others.

federal Universal Service Fund contributions and spread among the price cap baskets in proportion to each basket's end-user revenue.

II. DISCUSSION

A. In Seeking Comment on How to Implement Inter-Carrier Compensation Without Considering Whether Such Compensation is Warranted, the Commission Has Put the Cart Before the Horse

In seeking comment on *how* to fashion an inter-carrier compensation mechanism, the Commission has skipped right over the question of *whether* such a mechanism is even warranted. It offers no analysis of the costs and revenues associated with the provision of dial-up Internet access. Rather, its reasoning begins and ends with the observation that "LECs incur a cost when delivering traffic to an ISP that originates on another LEC's network."

This observation is, of course, correct, but it is hardly a basis, in itself, for ordering inter-carrier compensation. After all, LECs also incur costs when they *originate* ISP traffic and haul it to the LEC serving the ISP.

Implicit in the Commission's reasoning is its apparent assumption that ISP LECs do not recover their costs from their ISP customers, while originating LECs fully recover their costs from originating end users, through, for example, revenues generated by second lines. The Commission has never actually

Notice at para. 29.

See Access Charge Reform, 12 FCC Rcd 15982 (1997)(Access Reform Order) at para. 346 (wherein the Commission stated it was "not convinced that the

conducted any analysis upon which to base this assumption. It simply assumes this to be the case.

This assumption is wrong, at least as to Ameritech, and presumably as to other originating LECs as well. As demonstrated in Attachment A, Ameritech does not recover its costs from end-user revenues when it originates ISP traffic. Even limiting its analysis to end users who have purchased second lines and attributing *all* second line revenue, including applicable usage revenue in states lacking a flat-rated service option, to ISP access, Ameritech's costs of originating ISP traffic (using current TELRIC costs) exceed its revenues in all five of its states.¹⁰

Of course, many end users connect to their ISP using flat-rated local service on a single line. These end users were excluded from the study, although they generate no revenue at all when they originate ISP traffic. Obviously, when these end users are taken into account, the disparity between Ameritech's costs and revenues is far greater than the analysis shows.

nonassessment of access charges results in ISPs imposing uncompensated costs on incumbent LECs.")

As shown in the attached cost/revenue analysis, Ameritech has no revenue to share when its customers access the Internet. For example, in Illinois monthly revenue for a second line is \$23.31, but Ameritech's costs to carry this interstate traffic to the ISP LEC – even without reciprocal or inter-carrier compensation – is \$32.38, resulting in a shortfall of \$9.07. In Indiana, the revenue is \$26.88, while costs are \$31.05, resulting in a shortfall of \$4.17. In Michigan, revenue is \$22.86, while costs are \$33.11 – a shortfall of \$10.25. In Ohio, revenue is \$23.04, while costs are \$29.67 - a shortfall of \$6.63. And in Wisconsin, revenue is \$18.65, compared to \$33.90 in costs, creating a shortfall of \$15.25.

The reason Ameritech does not recover its costs when it originates ISP traffic is simple. Whereas the average local call lasts about 3.5 minutes, the average Internet session is 26 minutes. Since most of the costs of originating ISP traffic are usage-sensitive, the costs of originating ISP traffic significantly exceed the costs of originating a local call. Ameritech's intrastate rates, which were set at or close to the cost of a local call, thus do not permit recovery of the costs of originating ISP traffic.¹¹

Under these circumstances, any requirement that Ameritech compound its losses by paying inter-carrier compensation to LECs serving ISPs would be patently arbitrary, capricious, and unlawful. The Commission's stated goal in this proceeding is to achieve "efficient outcomes," thereby "ensuring the broadest possible entry of efficient new competitors, eliminating incentives for inefficient entry and irrational pricing schemes, and providing to consumers as rapidly as possible the benefits of competition and emerging technologies." These goals may well be unachievable so long as the Commission is unwilling to impose any access charges on ISPs. Nevertheless, the Commission ought not

The long holding times associated with ISP traffic also create network congestion that requires LECs to expand their facilities. These infrastructure costs also are not reflected in Ameritech's study.

Notice at para. 29.

Notice at para. 33 (emphasis added).

By perpetuating the ISP exemption and refusing to impose on ISPs even a cost-based usage charge, the Commission has severed the relationship between

exacerbate the irrational pricing engendered by the ISP exemption by piling subsidy on top of subsidy. Because of the access charge exemption, Ameritech is effectively denied the ability to recover its costs of originating ISP interstate access traffic. The ISP LEC may also be unable to recover its costs, but if that is the case, it should not be up to Ameritech – which already must offer ISP access at a loss – to guarantee the ISP LEC full cost recovery. That would not only compound Ameritech's losses, but heighten the distortions engendered by the ISP access charge exemption.

If the ISP LEC does not recover its costs through its existing intrastate rates, it has two choices. First, it can absorb the loss, as does Ameritech and presumably other originating LECs. Second, it can raise its intrastate rates for ISP services, and it can do so without subjecting its ISP customers to per-minute access charges.

This latter option is, in fact, the very option the Commission suggested to incumbent LECs in the *Access Reform Order*. There, after concluding that incumbent LECs had not shown that the ISP access charge exemption left them with uncompensated costs, the Commission stated: "To the extent that some intrastate rate structures fail to compensate incumbent LECs adequately for

costs and revenues in the provision of dial-up ISP access, effectively precluding efficient and rational pricing for Internet access service.

providing service to customers with high volumes of incoming calls [i.e., ISPs], incumbent LECs may address their concerns to state regulators."¹⁵

More importantly, this approach is the only one that can lead to the "efficient outcome" the Commission seeks if repeal of the access charge exemption is off the table. It is the only approach that can encourage rational pricing and, as such, the only approach consistent with efficient entry and investment decisions by LECs and ISPs. It is, therefore, the only approach that can unleash the forces of true competition to the benefit of consumers.

In contrast, requiring originating LECs to pay inter-carrier compensation to ISP LECs would be a quintessentially inefficient outcome. Any such requirement would further distort market signals for ISP traffic at the originating end, while eliminating any incentive for the ISP LEC to charge a rational price at the ISP end of the connection. By compounding the inefficient and irrational pricing engendered by the access charge exemption, this result would be directly contrary to the Commission's stated goals in this proceeding.

Ameritech recognizes that LECs traditionally have entered into meetpoint billing or revenue sharing arrangements to share access revenues when more than one LEC participates in the provision of an interstate access service. The Commission's apparent assumption, however, that these arrangements

Access Reform Order at para. 346. Of course, what is good for the goose is good for the gander. Since adjusting ISP rates is sufficient recourse for incumbent LECs, it is sufficient recourse for other LECs as well.

necessarily provide for "inter-carrier compensation" –i.e., a regime in which one LEC pays the other – is incorrect. Under many such arrangements, each LEC is separately paid its share of the revenues from the access service by the recipient of the access service. In these cases, no "inter-carrier compensation" is paid. These arrangements are analogous to the situation that exists today with respect to ISP traffic: the originating LEC collects revenues from its end user customers; the LEC serving the ISP collects revenues from the ISP.

More fundamentally, any analogy to meet-point billing or revenue sharing is inapt here because those arrangements assume the application of access charges that permit *each* carrier to recover its costs. These arrangements have never been used to guarantee one LEC, but not the other, full cost recovery.

In fact, to the extent that previous meet-point billing or revenue sharing arrangements serve as precedent at all, they dictate that the LEC serving the ISP should share its revenues with the originating LEC, not vice versa. ¹⁶ In exempting ISPs from the access charge regime, the Commission effectively permits ISPs to purchase access services from intrastate tariffs. The revenues derived from those sales, not the originating LEC's revenues from the sale of local lines, are the surrogate "access" revenues in this case. ¹⁷

¹⁶ Ameritech, though, is not proposing such a result in these comments.

The Commission's rules recognize that revenues from the sale of local lines are in no sense "incremental" revenues that could be attributed to any particular service. Thus, while section 69.106(c) requires LECs to provide a credit to purchasers of FG-A access in the amount of any *message unit* charges collected

In short, the Commission has put the cart before the horse in this proceeding. In seeking comment on how to implement inter-carrier compensation, it has failed to consider, in the first instance, whether such compensation is warranted at all. This is a fatal failing because, as Ameritech has shown, the assumptions upon which the Commission has proceeded are wrong. Ameritech does not recover its cost when it originates ISP traffic – far from it.

Given the disparity between Ameritech's costs and revenues in originating ISP traffic, Ameritech can only assume that other originating LECs also do not recover their costs. This is a matter the Commission must address before considering inter-carrier compensation. Certainly, there is no justification for requiring compensation of any LEC whose costs of originating ISP traffic exceed its revenues.¹⁸

under local tariffs, no credit is required when end users dial FG-A numbers using flat-rated local service. See 47 CFR § 69.106(c).

In an *ex parte* filed in CCB/CPD 97-30, Ameritech suggested that the Commission adopt a revenue sharing proposal *in lieu of reciprocal compensation* and as a compromise solution to pending reciprocal compensation claims. This proposal was offered as a political compromise in response to the Commission's urgings that carriers attempt to work out their differences on the reciprocal compensation issue. This offer fell on deaf ears. CLECs expressed no interest in it, and the Commission, while repudiating the basis for state decisions requiring reciprocal compensation, tried vainly to prop up those incorrect decisions. Particularly in light of the new information provided herewith, Ameritech can no longer support this proposal.

B. The Commission's Proposal to Require That Inter-Carrier Compensation be Governed by Interconnection Agreements Negotiated and Arbitrated Under Sections 251 and 252 of the Act is Unlawful

While, for the reasons stated above, no inter-carrier compensation mechanism for ISP traffic is warranted, the Commission's proposal that inter-carrier compensation should be governed by interconnection agreements negotiated and arbitrated pursuant to sections 251 and 252 of the Act is flawed on wholly independent grounds. In fact, this proposal would be unlawful on at least three independent legal grounds.¹⁹

First, even assuming *arguendo* that the Commission can lawfully leave to the states the regulation of interstate access traffic – which is by no means clear - state commissions would lack the authority to regulate that traffic. Like the FCC itself, state regulatory commissions are creatures of statute, and they derive their powers solely from the statutes that create them.²⁰ In many cases, these statutes

The Commission also asks whether it has authority to establish an arbitration process that is final and binding and not subject to judicial review. *Notice* at para. 32. It does not. No federal agency has the power to insulate is decisions from judicial review.

See, e.g., Union Carbide Corp. v. Public Service Commission, 431 Mich 135, 146, 428 NW2d 322 (1998)(the Michigan Public Service Commission "is a creature of statute and possesses no common-law powers. A statute that grants power to an administrative agency is to be construed strictly. Administrative authority must be granted affirmatively or plainly, for doubtful power does not exist."); Cities and Towns of Anderson v. Public Service Commission of Indiana, 397 N.E.2d 303, 305 (Ind. App. 1979) (the Indiana Utility Regulatory Commission "is a creature of statute" and "can exercise only such power as the legislature delegates to it."); Montgomery County Board of Commissioners v. Public Utility Commission of Ohio, 28 Ohio St. 3d 171, 503 N.E. 2d 167 (1986) (Public Utility Commission of Ohio is a creature of statute and can exercise only such authority

specifically limit state authority to intrastate traffic. For example, the statute that is the source of the Illinois Commerce Commission's regulatory authority over telecommunications carriers specifically circumscribes the Commission's authority to telecommunications services "between points within the State." Likewise, Ohio law defines the services over which the Public Utility of Ohio have jurisdiction – "Public telecommunications service" – as "communications originating and terminating in the state." Indeed, the Communications Act itself recognizes that the authority of state commissions is limited to intrastate traffic. Hence the term "State commission" is defined in the Act as "the commission,

as is conferred on it by statute); Business and Professional People for the Public Interest v. Illinois Commerce Commission, 146 Ill.2d 175, 195 (1991) (same); Wisconsin Telephone Co. v. Public Service Commission, 232 Wis. 274, 287 N.W. 122, rehearing denied, 287 N.W. 593, cert. denied, 309 U.S. 657 (1939) (same).

See 220 ILCS 5/13.202, which provides: "Telecommunications carrier' means and includes every corporation, company, association, joint stock company or association, firm, partnership or individual, their lessees, trustees or receivers appointed by any court whatsoever that owns, controls, operates or manages, within this State, directly or indirectly, for public use, any plant, equipment of property used or to be used for or in connection with, or owns or controls any franchise, license, permit or right to engage in the provision of, telecommunications services between points within the State which are specified by the user."

Oh. St. §4927.01. See also the Indiana Code (IC 8-1-2-88(a)(1)) (which defines "telephone service" to include only the "transmission of intelligence between two or more points within a single territorial area), and IC 8-1-2-88(a)(2) (which defines "telephone company" to include only those entities that own facilities used in the furnishing of 'telephone service within this state."); Wisc. Stat. §§ 196.01 (8m) (9m) and (10) (which define "telecommunications carrier," "telecommunications service," and "telecommunications utility" so as to limit the Wisconsin Commission's regulatory authority to carriers providing telecommunications service "within the state."). And see M.C.L. §§ 484.2102(b) and (ee); 484.2310(1) and (2); 484 §2201; 484.2401(2); and 484.2359.

board, or official (by whatever name designated) which under the laws of any State has regulatory jurisdiction with respect to *intrastate* operations of carriers."²³ As the FCC has recognized, ISP traffic is predominantly interstate. Thus, irrespective of whether the FCC has the power to leave the regulation of interstate access traffic to the states, state commissions would have no power to engage in such regulation.

Second, neither the FCC nor a state commission may require LECs to negotiate the terms of interstate inter-carrier compensation in the context of section 252 interconnection negotiations. The Communications Act is quite clear in specifying the scope of a LEC's negotiation obligations under section 252. It requires LECs to negotiate in good faith "the particular terms and conditions of agreements to fulfill the duties described in [sections 251(b) and 251(c)]. While LECs may agree voluntarily to negotiate matters that are outside the scope of sections 251(b) and (c), they are under no obligation to do so.

Neither section 251(b) nor section 251(c) requires inter-carrier compensation for interstate access traffic. The Commission has squarely held that "the reciprocal compensation requirements of section 251(b)(5) of the Act and Section 51, Subpart H (Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic) of the Commission's rules do

²³ 47 U.S.C.§ 153(41) (emphasis added).

²⁴ 47 U.S.C. § 251(c)(1). See also U.S.C. § 252(a)(1).

not govern inter-carrier compensation for this traffic."²⁵ Likewise, it has held that "the term 'interconnection' under section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic."²⁶ Certainly no other provision in either of those sections could even arguably give rise to an intercarrier compensation obligation.

That being the case, neither the Commission nor a state commission could require LECs to negotiate interstate inter-carrier compensation arrangements in a section 252 negotiation. Congress established section 252 for specified purposes, and it is not the Commission's prerogative to rewrite the Act.

Third, state commissions have no authority to impose inter-carrier compensation obligations on ISP traffic in a section 252 arbitration. For one thing, as a matter of basic common sense, they could not possibly have such authority, since, as shown above, LECs are under no obligation to negotiate as to these matters in the first place. Clearly, states may not use section 252 arbitrations to address interstate access issues as to which LECs need not even

Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98, FCC 99-38, released Feb. 26, 1999 at n. 87 (ISP Reciprocal Compensation Order).

Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, 11 FCC Rcd. 15499 (1996) (Local Competition Order) at para. 176. The Commission specifically distinguished between interconnection, on the one hand, and transport and termination, on the other. Since the interconnection requirements of section 251(c)(2) relate only to the physical linking of two networks, and not transport and termination, they provide no authority for requiring inter-carrier compensation for the transport and delivery of ISP traffic.

negotiate. Moreover, the Act is quite specific in defining the universe of matters that states may address through compulsory arbitrations. Section 252(c) provides that in resolving by arbitration any open issues, states must: (a) ensure that such resolution meets the requirements of section 251, including FCC regulations prescribed thereunder; (b) establish rates for interconnection, services, or network elements in accordance with the pricing standards of section 252(d); and (c) provide an implementation schedule. Nothing in that provision or any other provision of the Act confers upon the states the right to use a section 252 arbitration to impose inter-carrier compensation on interstate access traffic. Indeed, it is for that reason that the Illinois Commerce Commission refused to arbitrate access charge issues raised by TCG in interconnection negotiations with Ameritech.²⁷

In fact, many states would be precluded from addressing inter-carrier compensation for ISP traffic in an arbitration outside the purview of section 252. As creatures of statute, state commissions derive, not only their substantive, but their procedural authority from state law. Since section 252 does not authorize state commissions to arbitrate inter-carrier compensation for interstate access traffic, only state commissions that have independent authority under state law to conduct such an arbitration could do so (assuming, of course, that they also have substantive authority to regulate interstate access traffic). The FCC has

See Ameritech Illinois/TCG Arbitration Decision, Docket No. 96-AB-001 (III. C.C. Nov. 4, 1996).

undertaken no analysis to address how many state commissions have such express substantive and procedural authority under state law, and Ameritech suspects that most, if not all, do not.

C. The Commission Should Require LECs to Use Reasonable
Diligence in Identifying Their ISP Customers and Excluding ISP
Traffic That is Not Eligible for Reciprocal Compensation from
Their Reciprocal Compensation Bills.

Irrespective of whether the Commission requires inter-carrier compensation for ISP traffic – and as shown herein, it should not - the Commission should require all LECs to use reasonable diligence to identify their ISP customers and to exclude ISP traffic that is not eligible for reciprocal compensation from their reciprocal compensation bills. The Commission has recognized that section 251(b)(5) does not require reciprocal compensation for ISP traffic and that this conclusion might require state commissions to reexamine their interpretation of LEC interconnection agreements.²⁸ The Commission has also recognized that "efficient rates for inter-carrier compensation for ISP-bound traffic are not likely to be based entirely on minute-of-use pricing structures" used for reciprocal compensation.²⁹ Nevertheless, because dial-up ISP traffic is the functional equivalent of FG-A traffic, it is

ISP Reciprocal Compensation Order at para. 27 and note 87. The reciprocal compensation provisions of Ameritech's interconnection agreements plainly and explicitly track the requirements of section 251(b)(5). Thus, these agreements do not require reciprocal compensation for ISP traffic.

Notice at para. 29.

extremely difficult for an originating LEC to differentiate originating ISP traffic from local traffic. Indeed, the only way an originating LEC can identify ISP traffic – and thereby ensure that it is not inappropriately being billed reciprocal compensation for such traffic – is to monitor continually the telephone numbers of known ISPs and manually check its reciprocal compensation bills to eliminate billing for calls to those numbers. This is an inefficient, time-consuming process, and one that does not fully protect the originating LEC from inappropriate reciprocal compensation billings in any event.

Ameritech appreciates that LECs may not be aware of whether a particular customer is using its lines to provide an ISP service or some other service. LECs should, however, be required to take reasonable measures to identify their ISP customers, including, for example, by ascertaining whether customers ordering new business lines intend to use those lines for Internet access. They should also be prohibited from knowingly billing reciprocal compensation to which they are not entitled, including for lines which they know, or have reason to know, are ISP lines. Irrespective of whether they are eligible for inter-carrier compensation, LECs ought not be billing for reciprocal compensation to which they are not entitled.

D. MFN Rights Under Section 252(i) do not Apply Either to Reciprocal Compensation or Inter-Carrier Compensation

Noting that a state arbitrator last year concluded that section 252(i) entitles competing carriers to opt into a three-year interconnection agreement for a new

three-year term, the Commission seeks comment on whether and how section 252(i) affects parties' ability to negotiate or renegotiate the terms of their interconnection agreements. This inquiry is presumably prompted by the Commission's concerns that: (i) any reciprocal compensation provisions that apply to ISP traffic under existing interconnection agreements could be perpetuated, to the exclusion of inter-carrier compensation arrangements; and (ii) inter-carrier compensation arrangements themselves could be subject to MFN claims. Such concerns are unfounded. Section 252(i) applies neither to reciprocal compensation nor to inter-carrier compensation.

Section 252(i) requires each incumbent LEC to make available "any interconnection, service, or network element provided under an agreement approved under [section 252] to which it is a party to any other requesting telecommunications carrier upon the same terms and conditions as those provided in the agreement." Reciprocal compensation is not interconnection; it is not a service provided by an incumbent LEC; and it is not a network element. Therefore, section 252(i), by its terms, does not entitle a LEC to opt into the reciprocal compensation provisions of another LEC's interconnection agreement.

While this seems self-evident, some CLECs have argued that, even though reciprocal compensation is not interconnection, it is encompassed by section 252(i) because it is a term or condition of interconnection. That is incorrect. The Communications Act makes clear that the obligation to pay reciprocal

compensation is distinct from the obligation to interconnect on just and reasonable terms.

The duty of a LEC to establish reciprocal compensation arrangements for the transport and termination of telecommunications is set forth in Section 251(b)(5) of the Act. Section 251(c), which follows, begins by stating: "In addition to the duties contained in subsection (b), …" and then sets forth the additional obligations of incumbent LECs. These additional obligations include the duty to provide interconnection on "rates, terms, and conditions that are just, reasonable, and nondiscriminatory." The fact that Section 251(c)(2) makes absolutely no reference to reciprocal compensation, which is addressed in an entirely different subsection, sustains the conclusion that reciprocal compensation is not a term or condition of interconnection.

The Local Competition Order also recognizes the distinction between interconnection, on the one hand, and reciprocal compensation, on the other. Indeed, in that order, the Commission specifically discusses the relationship between interconnection under section 251(c)(2) and reciprocal compensation under section 251(b(5). The Commission makes it eminently clear that "interconnection" under section 251(c)(2) refers only to the physical linking of the two networks and does not include the transport and termination of traffic within the meaning of section 251(b)(5). Noting that interconnection and

³⁰ 47 U.S.C. § 251(c)(2)(D).

reciprocal compensation are subject to separate pricing standards under the Act, the FCC stated:

We conclude that the term "interconnection" under Section 251(c)(2) refers only to the physical linking of the two networks for the mutual exchange of traffic . . . and not the transport and termination of traffic.³¹

Congress' exclusion of reciprocal compensation from section 252(i) was not a fluke. On the contrary, it makes perfect sense that a requesting carrier is not allowed to adopt the reciprocal compensation provisions of another carrier's agreement, because the Act requires each carrier's reciprocal compensation rates to be based on its own costs. Specifically, the Act requires that reciprocal compensation rates must "provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier." Because reciprocal compensation payments must reflect the costs of the carrier receiving those payments, reciprocal compensation arrangements were not included in section 252(i).

Nor would it make economic sense to hold otherwise. If a particular requesting carrier has higher costs than the rest of the industry and is thus entitled to higher reciprocal compensation payments, it would defy sound economics to allow every other carrier to opt into that same rate. Indeed, to

Local Competition Order at para. 176.

³² 47 U.S.C. § 252(d)(2).

adopt such an absurd rule would turn the Commission's forward looking economic cost models on their head. Under those mechanisms, costs are assumed to be the costs of the most efficient provider. Applying section 252(i) to reciprocal compensation would allow each competitive LEC to assume the cost structure (for reciprocal compensation purposes) of the least efficient competitor. That should be an absurd result that is completely at odds with the Commission's local competition framework.

While it is thus clear that section 252(i) does not apply to reciprocal compensation, it is equally clear that this provision would not apply to any intercarrier compensation for ISP traffic that might be required. As noted, section 252(i) applies by its plain terms only to "any interconnection, service, or network element provided under an agreement approved under [section 252]." Just as reciprocal compensation is not an "interconnection, service, or network," neither is inter-carrier compensation for ISP traffic.

Because section 252(i) does not apply to reciprocal compensation or intercarrier compensation at all, the issue of whether CLECs that do exercise those rights are entitled to a new term is academic for present purposes. Suffice it to say, however, that the arbitration decision cited by the Commission is grossly misguided. If this decision accurately reflected the law – which it does not - any terms of any interconnection agreement could be extended, sequentially, in perpetuity. Notwithstanding cost changes, changes in technology, or changes in the competitive landscape, the obligations of an incumbent LEC could remain forever frozen in time. Congress could not have contemplated such an absurd result, and the Commission itself has already rejected such notion, holding that the terms of an agreement that are subject to section 252(i) must remain available only for "a reasonable amount of time."

The Commission has not yet addressed precisely what is a "reasonable" period of time for purposes of section 252(i), and the answer to that question presumably depends upon the facts. For present purposes, if the Commission concludes that the reciprocal compensation provisions of an agreement are subject to section 252(i) – which it should not – and it is found that a LEC has agreed to pay reciprocal compensation for ISP traffic – which Ameritech has not – the Commission should clarify that the "reasonable" time for opting into any such reciprocal compensation provisions for ISP traffic expired with the issuance of this *Notice*. That is because the Commission itself recognizes that "pure minute-of-use pricing structures [found in reciprocal compensation agreements] are not likely to reflect accurately how costs are incurred for delivering ISP-bound traffic." Having recognized that reciprocal compensation for ISP traffic

Local Competition Order at para. 1319. While the Commission has not defined what is a reasonable time for purposes of section 252(i), the Commission has permitted AT&T to limit the availability of its Tariff 12 offerings to ninety days in the face of a statutory nondiscrimination requirement. Indeed, it did so while AT&T was regulated as a nondominant carrier. If a ninety-day limitation on the availability of a Tariff 12 contract is not unreasonably discriminatory, it is hard to see how subjecting to LECs to "daisy-chaining" could possibly be reasonable.

Notice at para. 29.

is inefficient, the Commission should likewise recognize that it is not reasonable for these inefficient arrangements to be extended through the application of section 252(i).

E. ISP Traffic is Inseverable. While Ameritech Does not Oppose Booking the Costs and Revenues of this Interstate Traffic in the Intrastate Jurisdiction, any Inter-Carrier Compensation Payments Should be Booked as Interstate Costs.

The Commission also seeks comment on whether it is possible efficiently to separate intrastate ISP-bound traffic from interstate ISP-bound traffic, thereby permitting the FCC to regulate interstate ISP-bound traffic and the states to regulate intrastate ISP traffic. The Commission additionally asks how the revenues and costs of ISP traffic should be treated for separation purposes.

It is not currently feasible efficiently to separate interstate and intrastate ISP traffic. As the Commission recognized in the *Reciprocal Compensation Order*:

An Internet user typically communicates with more than one destination point during a single Internet call, or "session," and may do so either sequentially or simultaneously. In a single Internet communication, an Internet user may, for example, access websites that reside on servers in various states or foreign countries, communicate directly with another Internet user, or chat on-line with a group of Internet users, located in the same local exchange or in another country. Further complicating the matter of identifying the geographical destinations of Internet traffic is that the contents of popular websites increasingly are being stored in multiple servers throughout the Internet, based on "caching" or website "mirroring" techniques.³⁵

³⁵ ISP Reciprocal Compensation Order at para. 18.

Actually, the matter is even more complicated than that. Hosts that are connected to the Internet can be located anywhere, but neither the IP address of the host nor its domain name links the host to a specific geographic location. Thus, there is no practical way to identify the physical location of the host. Neither the ISP nor its subscriber can determine whether an Internet communication originates and terminates on servers within state boundaries. Consequently, concurrent state and federal regulation of this predominantly interstate traffic is a practical impossibility.

As for the separations treatment of ISP traffic, Ameritech currently books ISP costs and revenues to the intrastate jurisdiction and believes it is administratively easier to continue that practice.³⁶ If, however, the Commission requires Ameritech to pay inter-carrier compensation for ISP traffic, any such payments should be booked to the interstate jurisdiction. Unlike the cost, for example, of providing a primary or second line that is used both for ISP access and local calling, any inter-carrier compensation costs would be readily identifiable as a jurisdictionally interstate cost. No difficult cost allocation would be required.

These costs should also be recognized for what they are: a subsidy payment from the originating LEC. As such, consistent with Congress' emphasis on making subsidies explicit, they should be included with costs associated with

On the other hand, carriers should be permitted to assign those costs and revenues to the interstate jurisdiction if they have the ability to do so.

LEC federal Universal Service Fund contributions and spread among the price cap baskets in proportion to each basket's end-user revenue.³⁷

Respectfully Submitted,

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April 12, 1999

See Ameritech Petition for Expedited Waiver Concerning Treatment of Inter-Carrier Compensation Payments for Interstate ISP-Bound Traffic, April 2, 1999.

Description of Analysis

When Ameritech's intrastate rates for local telephone service were established, they were based on the costs of a local call, which typically averages about 3.5 minutes in duration. As customers have increasingly changed the use of local phone lines to include access to the Internet on a dial-up basis, the underlying costs have also changed. In particular, the duration of a typical Internet session in Ameritech's exchanges averages about 26 minutes, not 3.5 minutes.

Because the Commission has exempted this interstate access traffic from access charges, Ameritech and other Local Exchange Carriers ("LECs") have been limited to billing this interstate access traffic "as if" it were a local call, at intrastate rates. To determine the impact of this exemption on such Internet-bound traffic, Ameritech undertook a revenue and cost analysis. Although the revenues and costs used in this analysis are unique to Ameritech, the outcome would appear to apply in principle to all LECs.

Ameritech's analysis is simple and conservative. It demonstrates that a Local Exchange Carrier ("LEC") does not receive revenues sufficient to cover its costs when it provides local exchange service to end users who use the service for Internet access. This revenue shortfall occurs even when the end user purchases a "second line" for Internet access, and even when the LEC is not required to make any compensation payment to an interconnected secondary LEC which serves the ISP. It should be noted that this is not a jurisdiction-specific analysis but rather a non-jurisdictional analysis looking at overall costs and revenues. Some of the costs and revenues identified are clearly intrastate (e.g. 75% of the local loop), some are clearly interstate (e.g. 25% of the local loop), and others are currently subject to varying interpretations (e.g. the use of traffic-sensitive switching and transport facilities).

This analysis is based on an end user obtaining from a LEC a Residential "Second Line" (a Non-Primary Residence line under FCC rules) or additional business line to be used exclusively for Internet access, via an ISP that is served by a different (secondary) LEC. No additional services or features (such as Call Waiting or Caller-ID) are presumed to be purchased by the end user for the network access line, as such services and features have no value on a line used exclusively for Internet access.

In this analysis, it is assumed that the end user places 90 calls per month accessing the Internet, with an average duration of 26 minutes per call, resulting in a total of 39 hours per month online. The average call duration of 26 minutes is consistent with recent studies of Internet access traffic performed by Ameritech's network operations organization. The total online usage of 39 hours per month by an end user is consistent with Ameritech's understanding of current ISP industry standards, such as 15 to 20,000 minutes of use incoming per modem line and an average of eight end users per incoming modem line (39 hours * 8 users = 18,720 minutes per month per line). This number of hours may in fact be conservative for the type of user that would have a second or additional line used solely for Internet access.

This analysis identifies only the costs incurred by the end user's LEC in providing service to the end user over its own network facilities, and does not include as a cost any potential payment of inter-carrier compensation to the secondary LEC serving the ISP.

The costs incurred by the end user's LEC are then compared to the revenues that would be received by that LEC for provision of the service under the applicable state and federal tariffs in each of the five Ameritech states. Ameritech's tariffs are used as the basis for determining the revenues. Costs and revenues are based on 82% Residence traffic and 18% Business traffic for Internet access, consistent with recent studies of Internet access

traffic performed by Ameritech's network operations organization. In every case the revenues received are less than the costs incurred.

Cost of Service

There are two main service cost elements.

- (1) The Network Access Line ("NAL"), which includes the local loop connecting the end user's premises to the local central office building and the connection to the switch within that central office. The cost of the NAL is a fixed monthly cost for facilities dedicated to the end user.
- (2) The use of network switching and transport facilities starting with the originating switch and continuing over interoffice transport and tandem switching facilities to the point where the calls are handed-off by the end user's LEC to the secondary LEC (at the secondary LEC's switch location which serves the ISP). The cost of the use of these network switching and transport facilities is a variable (traffic-sensitive) cost.

The costs assigned to each of these cost elements are determined by employing the most current costs from state commission proceedings addressing the wholesale cost (i.e., "TELRIC" type costs) of interconnection services and unbundled network elements. In three states (Illinois, Michigan, and Wisconsin) the costs used are commission-approved costs that are reflected in wholesale tariff rates for interconnection and unbundled network elements. In the other two states (Indiana and Ohio), the costs employed are those most recently filed by Ameritech in compliance with commission orders in ongoing dockets, and are generally consistent with the cost levels in the other three states.

The diagram on page 9 pictorially depicts the following description of how the costs were assembled for this analysis.

The cost for the Network Access Line consists of three parts.

- (1) The cost of a basic voice-grade unbundled loop. In the case of states with geographically deaveraged loop costs, a melded cost based on overall residential demand distribution is used. For example, in Illinois, the meld for a Residence Network Access Line is 2% in Area A (the heart of the downtown Chicago business district), 35% in Area B (primarily the remainder of Chicago and certain adjacent suburbs), and 63% in Area C (the remainder of the state, including most of the Chicago suburban area). The meld for a Business line in each state is different than that for a residence line (e.g., the business line meld in Illinois is 11% Area A, 28% Area B, and 61 % Area C), resulting in a different overall cost for a business line.
- (2) The cost of a basic voice-grade line-side unbundled local switch port.
- (3) The cost of a cross-connection from the loop to the switch port.

The cost for the use of network switching and transport also consists of three parts, though the combining of those three parts is somewhat more complex than it is for the Network Access Line due to the traffic-sensitive nature of the cost. It should be noted that the tandem and transport portions of the cost, though more complex to determine, represent only a very small part of the overall cost.

- (1) The first cost element is the cost of end office switching, per minute of use. This cost includes both the use of the switching "matrix" and the use of the trunk port where the interoffice trunking is connected to the end office switch.
- (2) The cost of interoffice transport per minute of use from originating LEC switch serving the end user to secondary LEC switch serving the ISP is calculated by employing the multi-element interoffice transport costs. For this analysis, the overall cost is based on a mixture of direct trunk and tandem routing, with 50% of the traffic identified as tandem routed, consistent with current inter-carrier traffic flows from Ameritech's end offices. One set of transport terminations and twenty miles of

transport facilities mileage are included for the direct trunk route. Two sets of transport terminations (one for each end-office-to-tandem segment) and a total of twenty miles of transport facilities mileage (for both segments together) are included for the tandem route.

(3) The cost of tandem switching per minute of use is the third cost element. This cost includes both the use of the switching "matrix" and the use of the incoming and outgoing trunk ports where the interoffice trunking is connected to the tandem switch. It is applied to only 50% of the traffic, consistent with the application described for interoffice transport above.

In addition to the wholesale costs identified as described above, retailing costs are added to produce the total cost. Retailing costs are determined using the state commissionapproved wholesale discount factor for resale service in each state. These factors are designed to identify the net difference between the cost of providing a service on a retail basis as opposed to a wholesale basis. The inverse of the discount percentage applied to retail rates represents the equivalent markup to wholesale rates required to reach the retail rate level. For example, if the wholesale discount is 20% (i.e. wholesale = 0.8 * retail), then the markup for retailing costs on top of wholesale costs is 25% (i.e. retail = wholesale $*\frac{1}{0.8}$). Thus, if the wholesale cost determined as described above were \$20 per line, and the wholesale resale discount in the state were 20%, the total cost would be \$20*1.25, or \$25 (just as in the reverse case, the application of a 20% discount factor to a \$25 retail rate would produce a wholesale rate of \$20). In states where two discount factors have been mandated by the state commission (with the application depending on whether or not Operator Services and Directory Assistance are provided as part of the resold service), the lower of the two factors has been used in this analysis, resulting in a lower identification of retailing costs. In all states the Network Access Line cost computed in this study is less than four times the applicable federal EUCL charge for a "Non-Primary Residence" or "Multiline Business" line, and the EUCL charge represents

less than 25% of the unseparated cost of a Network Access Line due to line termination costs being assigned to the interstate jurisdiction based on a Dial Equipment Minutes factor of less than 25%.

Revenues Received for Service

Revenues received are calculated based on Ameritech's state and federal tariff rates for residential local exchange service in the five states, applied to the same service demand quantities discussed above. In two cases, the rates have been adjusted to reflect subsidy amounts that are included in the tariff rates but for which the revenues are passed on to the subsidy-receiving organization and are not retained by Ameritech, as noted below. Applicable rates (and adjustments) for each state are as follows.

For Illinois, the rates are the monthly residence and business Network Access Line rates (a demand-weighted meld of geographically deaveraged rates, as discussed above in relation to local loop costs), the federal EUCL charge for Non-Primary Residence and Multiline Business lines, intrastate PICC charges, and usage charges for the 90 calls per month. The residence usage rates are per-call rates, with an average computed using the historical residential mix of peak and off-peak messages and the application of volume discounts to the resulting revenues per the tariff. The business usage rates are per-minute rates, with neither off-peak or volume discounts applicable.

For Indiana, the rates are the monthly residence and business Network Access Line rates (a demand-weighted meld of geographically deaveraged rates, as discussed above in relation to local loop costs), the federal EUCL charge for Non-Primary Residence and Multiline Business lines, and intrastate EUCL and PICC charges. There are no usage charges for either the residential line or the business line, as the Network Access Line rate used in this analysis allows for unlimited monthly calls at no additional charge.

For Michigan, the rates are the monthly residence and business Network Access Line rates (a demand-weighted meld of geographically deaveraged rates, as discussed above in relation to local loop costs), the federal EUCL charge for Non-Primary Residence and Multiline Business lines, intrastate EUCL and PICC charges, and business-only usage charges for the 90 calls per month. The business usage rates are per-call rates, with neither off-peak or volume discounts applicable. There are no usage charges for the residential line, because the 90 calls do not exceed the free call allowance of 400 calls included with the Network Access Line. The residence and business Network Access Line rates were also adjusted to remove a Dual Party Relay Service (TDD to voice) subsidy of \$0.23 embedded in those tariff rates which goes to fund the operation of the Dual Party Relay Service.

For Ohio, the rates are the monthly residence and business Network Access Line rates (for business only, a demand-weighted meld of geographically deaveraged rates, as discussed above in relation to local loop costs), the federal EUCL charge for Non-Primary Residence and Multiline Business lines, intrastate PICC charges, and business-only usage charges for the 90 calls per month. The business usage rates are per-call rates, with neither off-peak or volume discounts applicable. There are no usage charges for the residential line, because the Network Access Line rate used in this analysis includes the flat-rate calling package which allows for unlimited monthly calls at no additional charge.

For Wisconsin, the rates are the monthly residence and business Network Access Line rates, the federal EUCL charge for Non-Primary Residence and Multiline Business lines, intrastate PICC charges, and usage charges for the 90 calls per month. The residence and business usage rates are per-call rates, with neither off-peak or volume discounts applicable for the specified call volume. The residence and business Network Access Line rates were also adjusted to remove a Technology for Educational Achievement ("TEACH") subsidy of \$0.74 embedded in those tariff rates which goes to fund the operation of the TEACH program. TEACH is legislatively-mandated program in

Wisconsin funded by increases in basic telephone rates that is used to pay for telecommunication improvements on University of Wisconsin System campuses, and for making data lines and video links available to schools and libraries in the state.

Certain other revenues related to local exchange Network Access Lines were identified and were specifically excluded from this analysis because they are targeted to cover specific costs that are outside the bounds of this analysis and are therefore not available to cover the costs identified in this analysis. These revenues exclusions include the following:

Interstate PICC charges are assessed on each Network Access Line, but the revenues from these PICC charges are used to subsidize below-cost (capped at \$3.50) interstate EUCL charges for primary residence and single line business lines. Those PICC revenues are therefore not available to cover the costs identified in this analysis.

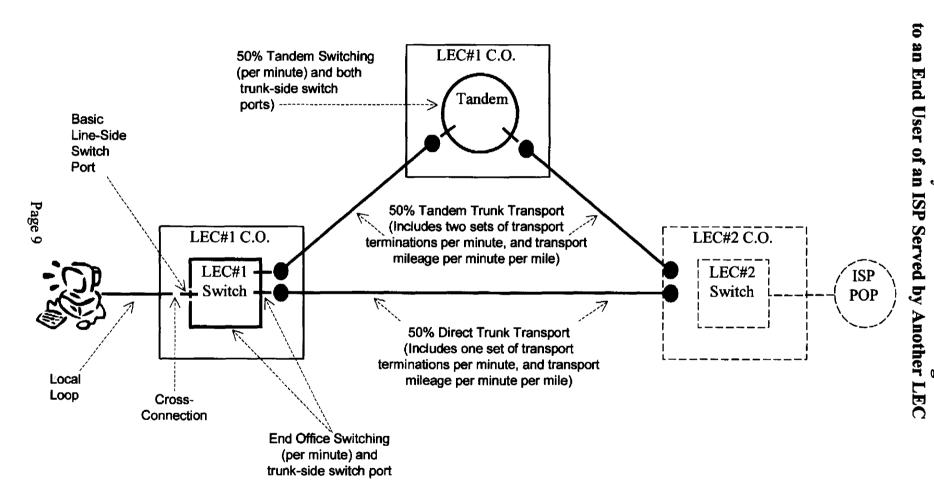
The recently authorized Number Portability cost recovery charges are assessed on most Network Access Lines, but revenues from those are specifically designed to cover the identified incremental cost of providing number portability which is not included in the cost portion of this analysis.

Custom calling services are often ordered for primary residential exchange lines, but no custom calling features are needed for a line used exclusively for Internet access, and second lines in general are typically ordered without such features at a far higher percentage than are primary lines. It would therefore not be appropriate to include any custom calling revenues in this analysis.

Results of the Analysis

The results of the analysis for each of the five states are shown on pages 10-14. In every case the revenues received are less than the costs incurred.

Cost Elements for a LEC Providing Service to an End User of an ISP Served by Another LEC



Cost vs. Revenue Analysis for a LEC Providing Service

ILLINOIS	
	COST INPUT VALUES:
\$9.71 \$5.01 \$9.21 \$5.01 \$0.14	Basic Residence Voice Grade Loop Cost Basic Residence Voice Grade Switch Port Cost Basic Business Voice Grade Loop Cost Basic Business Voice Grade Switch Port Cost Basic Voice Grade Cross-Connect Cost
\$0.003746 \$0.001072 \$0.000201 \$0.000013 50% 20 \$0.004844	End Office Switching Cost per MOU Tandem Switching Cost per MOU Transport Termination Cost per MOU Transport Minute/Mile Cost per MOU Percent Calls Tandem Routed Avg Transport miles per call (computed) Network cost per Minute for LEC Serving End User
19.40%	Wholesale Resale Discount Percentage (Retailing Costs)
	REVENUE INPUT VALUES:
\$7.66 \$5.40 \$0.06	Monthly Rate for basic Residence Access Line Monthly Rate for Non-Primary Residence EUCL (FCC) Monthly Rate for Non-Primary Residence EUCL and PICC (State)
\$10.09 \$5.40 \$0.06	Monthly Rate for basic Business Access Line Monthly Rate for Multiline Business EUCL (FCC) Monthly Rate for Multiline Business EUCL and PICC (State)
\$0.0411 \$0.4150	Per-Call Rate for Residence Local Call to ISP Per-Call Rate for Business Local Call to ISP
	OTHER INPUT VALUES:
26 39 90	Average Minutes per ISP Call Online Hours per Month for End User (computed) Calls per Month for End User
18%	Percentage of ISP Access Traffic Originating from Business End Users
	RESULTS:
\$18.32 \$14.06	Monthly Fixed Cost Per End User for LEC Serving End User Monthly Usage Cost Per End User for LEC Serving End User
\$13.55 \$9.76	Monthly Fixed Revenues Per End User for LEC Serving End User Monthly Usage Revenues Per End User for LEC Serving End User
(\$4.77) (\$4.30) (\$9.07)	Monthly Fixed Surplus or (Shortfall) Per End User for LEC Serving End User Monthly Usage Surplus or (Shortfall) Per End User for LEC Serving End User Monthly Total Surplus or (Shortfall) Per End User for LEC Serving End User

INDIANA	
	COST INPUT VALUES:
\$8.33 \$5.34 \$8.32 \$5.34 \$0.14	Basic Residence Voice Grade Loop Cost Basic Residence Voice Grade Switch Port Cost Basic Business Voice Grade Loop Cost Basic Business Voice Grade Switch Port Cost Basic Voice Grade Cross-Connect Cost
\$0.004097 \$0.000307 \$0.000102 \$0.000005 50% 20 \$0.004504	End Office Switching Cost per MOU Tandem Switching Cost per MOU Transport Termination Cost per MOU Transport Minute/Mile Cost per MOU Percent Calls Tandem Routed Avg Transport miles per call (computed) Network cost per Minute for LEC Serving End User
21.46%	Wholesale Resale Discount Percentage (Retailing Costs)
	REVENUE INPUT VALUES:
\$12.56 \$6.07 \$1.50	Monthly Rate for basic Residence Access Line Monthly Rate for Non-Primary Residence EUCL (FCC) Monthly Rate for Non-Primary Residence EUCL and PICC (State)
\$43.07 \$6.31 \$8.20	Monthly Rate for basic Business Access Line Monthly Rate for Multiline Business EUCL (FCC) Monthly Rate for Multiline Business EUCL and PICC (State)
\$0.000 \$0.000	Per-Call Rate for Residence Local Call to ISP Per-Call Rate for Business Local Call to ISP
	OTHER INPUT VALUES:
26 39 90	Average Minutes per ISP Call Online Hours per Month for End User (computed) Calls per Month for End User
18%	Percentage of ISP Access Traffic Originating from Business End Users
	RESULTS:
\$17.58	Monthly Fixed Cost Per End User for LEC Serving End User
\$13.42	Monthly Usage Cost Per End User for LEC Serving End User
\$26.88	Monthly Fixed Revenues Per End User for LEC Serving End User
\$0.00	Monthly Usage Revenues Per End User for LEC Serving End User
\$9.30	Monthly Fixed Surplus or (Shortfall) Per End User for LEC Serving End User
(\$13.42)	Monthly Usage Surplus or (Shortfall) Per End User for LEC Serving End User

Monthly Total Surplus or (Shortfall) Per End User for LEC Serving End User

(\$4.12)

MICHIGAN **COST INPUT VALUES:** \$12.60 Basic Residence Voice Grade Loop Cost \$2.27 Basic Residence Voice Grade Switch Port Cost \$12.48 Basic Business Voice Grade Loop Cost \$2.27 Basic Business Voice Grade Switch Port Cost \$0.17 **Basic Voice Grade Cross-Connect Cost** \$0.004053 End Office Switching Cost per MOU \$0.000698 Tandem Switching Cost per MOU \$0.000260 **Transport Termination Cost per MOU** \$0.000006 Transport Minute/Mile Cost per MOU 50% Percent Calls Tandem Routed 20 Avg Transport miles per call \$0.004912 (computed) Network cost per Minute for LEC Serving End User 19.96% Wholesale Resale Discount Percentage (Retailing Costs) **REVENUE INPUT VALUES:** \$12.89 Monthly Rate for basic Residence Access Line Monthly Rate for Non-Primary Residence EUCL (FCC) \$5.62 \$2.95 Monthly Rate for Non-Primary Residence EUCL and PICC (State) \$13.18 Monthly Rate for basic Business Access Line \$5.62 Monthly Rate for Multiline Business EUCL (FCC) \$2.85 Monthly Rate for Multiline Business EUCL and PICC (State) \$0.000 Per-Call Rate for Residence Local Call to ISP \$0.0853 Per-Call Rate for Business Local Call to ISP **OTHER INPUT VALUES:** Average Minutes per ISP Call 26 39 Online Hours per Month for End User

RESULTS:

90

18%

\$18.77 \$14.36	Monthly Fixed Cost Per End User for LEC Serving End User Monthly Usage Cost Per End User for LEC Serving End User
\$21.49	Monthly Fixed Revenues Per End User for LEC Serving End User
\$1.38	Monthly Usage Revenues Per End User for LEC Serving End User
\$2.72	Monthly Fixed Surplus or (Shortfall) Per End User for LEC Serving End User
(\$12.98)	Monthly Usage Surplus or (Shortfall) Per End User for LEC Serving End User
(\$10.26)	Monthly Total Surplus or (Shortfall) Per End User for LEC Serving End User

Percentage of ISP Access Traffic Originating from Business End Users

(computed) Calls per Month for End User

1	ОНЮ	
		COST INPUT VALUES:
	\$8.48 \$4.63 \$8.25 \$4.63 \$0.15	Basic Residence Voice Grade Loop Cost Basic Residence Voice Grade Switch Port Cost Basic Business Voice Grade Loop Cost Basic Business Voice Grade Switch Port Cost Basic Voice Grade Cross-Connect Cost
	\$0.003815 \$0.000660 \$0.000155 \$0.000006 50% 20 \$0.004498	End Office Switching Cost per MOU Tandem Switching Cost per MOU Transport Termination Cost per MOU Transport Minute/Mile Cost per MOU Percent Calls Tandem Routed Avg Transport miles per call (computed) Network cost per Minute for LEC Serving End User
	20.29%	Wholesale Resale Discount Percentage (Retailing Costs)
		REVENUE INPUT VALUES:
	\$14.40 \$5.97 \$0.13	Monthly Rate for basic Residence Access Line Monthly Rate for Non-Primary Residence EUCL (FCC) Monthly Rate for Non-Primary Residence EUCL and PICC (State)
	\$21.42 \$5.97 \$0.13	Monthly Rate for basic Business Access Line Monthly Rate for Multiline Business EUCL (FCC) Monthly Rate for Multiline Business EUCL and PICC (State)
	\$0.000 \$0.0834	Per-Call Rate for Residence Local Call to ISP Per-Call Rate for Business Local Call to ISP
		OTHER INPUT VALUES:
	26 39 90	Average Minutes per ISP Call Online Hours per Month for End User (computed) Calls per Month for End User
	18%	Percentage of ISP Access Traffic Originating from Business End Users
		RESULTS:
	\$16.58 \$13.20	Monthly Fixed Cost Per End User for LEC Serving End User Monthly Usage Cost Per End User for LEC Serving End User
	\$21.76 \$1.35	Monthly Fixed Revenues Per End User for LEC Serving End User Monthly Usage Revenues Per End User for LEC Serving End User
Į	\$5.18	Monthly Fixed Surplus or (Shortfall) Per End User for LEC Serving End User
١	(\$11.85)	Monthly Usage Surplus or (Shortfall) Per End User for LEC Serving End User
	/\$6 67\	Monthly Total Surplus or (Shortfall) Par End User for LEC Serving End User

WISCONSIN	
	COST INPUT VALUES:
\$10.90 \$3.71 \$10.90 \$6.25 \$0.19	Basic Residence Voice Grade Loop Cost Basic Residence Voice Grade Switch Port Cost Basic Business Voice Grade Loop Cost Basic Business Voice Grade Switch Port Cost Basic Voice Grade Cross-Connect Cost
\$0.004241 \$0.000704 \$0.000188 \$0.000014 50% 20 \$0.005155	End Office Switching Cost per MOU Tandem Switching Cost per MOU Transport Termination Cost per MOU Transport Minute/Mile Cost per MOU Percent Calls Tandem Routed Avg Transport miles per call (computed) Network cost per Minute for LEC Serving End User
19.40%	Wholesale Resale Discount Percentage (Retailing Costs)
	REVENUE INPUT VALUES:
\$5.75 \$5.65 \$0.30	Monthly Rate for basic Residence Access Line Monthly Rate for Non-Primary Residence EUCL (FCC) Monthly Rate for Non-Primary Residence EUCL and PICC (State)
\$14.85 \$5.65 \$0.30	Monthly Rate for basic Business Access Line Monthly Rate for Multiline Business EUCL (FCC) Monthly Rate for Multiline Business EUCL and PICC (State)
\$0.050 \$0.100	Per-Call Rate for Residence Local Call to ISP Per-Call Rate for Business Local Call to ISP
	OTHER INPUT VALUES:
26 39 90	Average Minutes per ISP Call Online Hours per Month for End User (computed) Calls per Month for End User
18%	Percentage of ISP Access Traffic Originating from Business End Users
	RESULTS:
\$18.93 \$14.97	Monthly Fixed Cost Per End User for LEC Serving End User Monthly Usage Cost Per End User for LEC Serving End User
\$13.34 \$5.31	Monthly Fixed Revenues Per End User for LEC Serving End User Monthly Usage Revenues Per End User for LEC Serving End User
(\$5.59) (\$9.66) (\$15.25)	Monthly Fixed Surplus or (Shortfall) Per End User for LEC Serving End User Monthly Usage Surplus or (Shortfall) Per End User for LEC Serving End User Monthly Total Surplus or (Shortfall) Per End User for LEC Serving End User

Monthly Total Surplus or (Shortfall) Per End User for LEC Serving End User